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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,604	07/18/2003	Tat Kong Chau	477/2	4297
27538	7590	02/10/2005	EXAMINER	
KAPLAN & GILMAN , L.L.P. 900 ROUTE 9 NORTH WOODBIDGE, NJ 07095			MRUK, GEOFFREY S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,604	Applicant(s) CHAU, TAT KONG	
	Examiner Geoffrey Mruk	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 02 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 8-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 8-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2 December 2004.

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because element 15 is not labeled in Figure 7A. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

The specification states "The discharge of ink 7 from the ink chamber 8 causes the negative pressure within the ink chamber 8 to increase" (page 9, lines 13-14).

This is inconsistent with the background of the application, which states "As ink is discharged, the negative pressure within the ink chamber decreases making it increasingly difficult for ink to be supplied to the print head" (page 2, lines 10-11).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Qingguo et al. (US 2003/0107626 A1).

With respect to claim 1, Qingguo discloses a refillable ink cartridge (Fig. 13) for removable connection to a print head. The cartridge can be conveniently refilled with ink by utilizing the ink-filling hole (Fig. 13, element 440) located on the cartridge cover.

The ink cartridge comprising:

- at least one ink chamber (Fig. 13) comprising side walls and a bottom wall;
- a cover (Fig. 13, element 410) hermetically sealing the ink chamber or chambers by forming a top wall therefor;
- a tube (Fig. 14) associated with each ink chamber, the tube extending from the cover (Fig. 13, element 410) into the ink chamber and comprising

a continuous opening extending from an upper to a lower end of the tube (paragraph 170);

- a valve (Fig. 14, element 428) associated with the opening at the lower end of the tube (Fig. 14) to enable the opening to be opened and closed to controllably admit air into the ink chamber (paragraphs 169-170); and
- an ink supply port (Fig. 14, element 404) through which ink is supplied to the print head via an ink supply needle (Fig. 14, element 50).

With respect to claim 2, Qingguo discloses an operational negative pressure within the ink chamber is regulated by the valve so that the operational negative pressure is sufficiently low to maintain a flow of ink from the ink supply needle as required whilst being sufficiently high to prevent seepage of ink therefrom (paragraph 164).

With respect to claim 3, Qingguo discloses a tube (Fig. 14) associated with each ink chamber (Fig. 13) is an elongate tube (paragraph 164).

With respect to claim 6, Qingguo discloses a valve (Fig. 14, element 428) comprising a movable portion (Fig. 14, element 428) and a fixed portion (Fig. 14, element 432).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Qingguo et al. (US 2003/0107626 A1) in view of Ujita et al. (US 5,500,663).

With respect to claim 7, Qingguo teaches a valve mechanism to admit air into the ink chamber.

Qingguo fails to teach a valve mechanism that comprises a resiliently deformable material, which deforms to admit air into the chamber.

Ujita teaches a valve mechanism that utilizes an elastic thin film (Fig. 7, element 5) that opens and closes to admit air, in order to regulate pressure within the ink container (column 7, lines 63-67 and column 8, lines 1-8).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to replace the valve mechanism of Qingguo with the valve mechanism of Ujita. The motivation for doing so would have been to provide the ink cartridge disclosed by Qingguo with a reliable valve mechanism for regulation of pressure within the ink cartridge.

Allowable Subject Matter

Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 4, the prior art of record fails to teach an elongated tube having more than one reinforcing rib running along its length.

With respect to claim 5, the prior art of record fails to teach the lower end of the tube extending into a separate well, which is positioned in the bottom wall of the ink chamber, in combination with a valve associated with the lower opening of the tube.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mou et al. (US 6,523,946 B2) discloses an ink cartridge containing a hollow tube used for adjusting the back pressure within the ink reservoir.

Chan et al. (US 6,550,900 B2) discloses an ink cartridge containing a pipe used for raising the pressure within the ink reservoir.

Art Unit: 2853

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is (571) 272-2810. The examiner can normally be reached on 7am - 330pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GSM
1/26/2005

GM

Michael S. Brook
Primary Examiner
Au 2853